CITY OF BOULDER, COLORADO
NOTICE OF CALL FOR PROPOSALS
ADVERTISMENT
RFP NO. 30-2008

Iris and Cherryvale Pump and Pressure Reduction Stations Improvements
Design and Engineering Services During Construction

The City of Boulder is requesting proposals presenting qualifications and approaches to design upgrades for Iris and Cherryvale Pump and Pressure Reduction Stations in the City's treated water distribution system. This work will include evaluation of the distribution system to determine the best approach to achieve the required capacity increase at these pump stations. To increase the capacity is expected to require replacement of the Iris Pump Station and replacement of the pumps and associated work in the Cherryvale Pump Station. Other, as yet undefined, work determined during the evaluation to be economically advantageous or timely to complete as a part of this project may also be included.

Bid documents are available for download or inspection on our website at:
http://www.bouldercolorado.gov/purchasing

Proposals (6 copies) must be received by 5:00 p.m., July 17, 2008 at the City's Public Works Utilities Office located at 1739 Broadway, Room 211, Boulder, CO 80302. Bids can be mailed to:

Randy Earley
City of Boulder – Utilities Department
P.O. Box 791
Boulder, Colorado 80306-0791

Bids shall be prepared at the bidder's expense and becomes a city record and therefore a public record.

The services upon which proposals are submitted shall equal or exceed the City of Boulder specifications. Preference is hereby given to labor, materials, supplies or provisions produced, manufactured or grown in Colorado, quality and price being equal to articles or services offered by competitors outside the State of Colorado.

The lowest responsible and best proposal shall be accepted; provided, however, that the City, acting through its duly authorized representatives, shall have the right to reject any and all proposals and waive any informality or irregularity contained in said proposal.

City of Boulder, Colorado
A Municipal Corporation

By: _____
For the Director of Finance and Record
Ex-officio City Clerk

City of Boulder, Colorado
Request for Proposals
RFP # 30-2008

Iris and Cherryvale Pump and Pressure Reduction Stations Improvements
Design and Engineering Services During Construction

I. Introduction

The City of Boulder (City) is requesting proposals presenting qualifications and approaches to design upgrades for Iris and Cherryvale Pump and Pressure Reduction Stations in the City's treated water distribution system. This work will include evaluation of the distribution system to determine the best approach to achieve the required capacity increase at these pump stations. To increase the capacity is expected to require replacement of the Iris Pump Station and replacement of the pumps and associated work in the Cherryvale Pump Station. Other, as yet undefined, work determined during the evaluation to be economically advantageous or timely to complete as a part of this project may also be included.

II. Background

The City's water utility includes two water treatment plants, six treated water storage tanks and three pressure zones ranging in elevation from 5750' to 5150'. During the 2003 drought, it was determined that the city would benefit from being able to supply more water from its Boulder Reservoir Water Treatment Plant (BRWTP) in Zone 1. In order to accomplish this, several components needed improvement. The treatment capacity of the plant was increased and more transmission capacity was added in pressure Zone 1.

Zone 1, the lowest zone, is supplied directly by the BRWTP. The Iris and Cherryvale pump stations serve as the connections between the two lower pressure zones, Zones 1 and 2. The pump stations can pump water from Zone 1 to Zone 2 or act as pressure reduction stations and drop the water from Zone 2 into Zone 1. Past evaluations have shown that these stations need increased pumping capacity to supply more BRWTP water to the system.
The three existing 125 horsepower pumps at Cherryvale were rated to pump 2.5 mgd against 185 feet of head with a shutoff head of 250 feet. The Iris pump station has two 150 horsepower pumps each capable of pumping 2.6 mgd against 226 feet of head. The original 'Zone 1 Distribution System Analysis' calls for Cherryvale to be able to move 5 MGD and Iris to pump 7.6 MGD. This project will design those pump station improvements.

In addition to the design of the improvements at the pump stations, other evaluations or improvements to the water distribution system may be included in this project. The interconnection between zones 1 and 2 must be maintained

and remain in service during the construction of any station improvements.

III. Proposed Scope of Work

A. Work Elements

- Overall - The consultant selected to perform this work will provide pump station design and associated system evaluation. This work will range from pre-design meetings with city staff to project completion and startup. An existing report, 'Zone1 Distribution System Analysis' by Integra Engineering, will need to be revisited to confirm that the recommendations from that study remain uncharged today. The transmission system pipe capacity in zone 2 must be evaluated using hydraulic modeling software to confirm no restrictions exist that would limit transmission capacity or cause pressure problems in zone 2 when supplying more water from the BRWTP. City staff has recently completed a GIS based model using MWH's Infowater of the entire distribution system. This model is exportable to EPAnet format and will be available to the selected consultant to facilitate the evaluation phase of the design.
- Staff Participation - Design process will include interaction with city staff responsible to operate and maintain the facilities involved in design decisions. This could include pre-design, 30% design review, 50% design review, and 90% design review meetings with the consultant and various city staff.
- Design - The required design will include hydraulic design, structural design, electrical and instrumentation design along with ancillary work required to design fully functional pump station improvements. Supervisory Control and Data Acquisition (SCADA) system improvements will be incorporated into the final design. Approvals and permit requirements will be determined during the preliminary design phase. The consultant will provide approval and permitting services, if required, assisting the city with obtaining all required permits and approvals required to construct the improvements. The services will include but not necessarily be limited to preparing application submittals, making technical presentations and revising plans and submissions to meet permit conditions as the project moves through the approval process.
- Final design - The final design phase will include generating technical specifications and drawings for the improvements that incorporate all the specific requirements of the design in drawings and bid packets. The drawings and specification will be provided to the city in electronic PDF file format.
- Bidding services - The consultant will assist with the bidding process and contractor selection process as appropriate. This will include attending the all pre-bid meetings, providing technical

expertise at these meetings, responding to queries during the bidding process and assisting the city staff with the evaluation of the bid proposals.

- Construction services - During the construction phase of the project the consultant will provide contract administration, inspection and unit startup assistance. These services should include preparation of as-built drawings in AutoCAD and PDF formats.
- Related Elements - Other related items may have to be addressed in this project and design as a part of this work. Any related transmission system pressure or velocity problems will have to be addressed before the stations are capable of operating at full capacity.

B. Schedule – The consultant selection process should be completed by July 31, 2008. The current schedule includes design and system evaluation starting in August 2008 with the design being completed in December 2008. Any system deficiencies identified in the evaluation phase will have to be corrected prior to startup of the pump stations. Any pre-bidding approvals will be obtained and the bidding to construct the improvements will occur in January or February 2009. Construction should be completed nine months later allowing for long lead time mechanical and electrical items.

C. Cost – The city has budgeted 150,000 dollars in 2008 for the design and engineering work associated with this project. The water utility capital improvements project budget has 1.5 million dollars in 2009 for Iris and Cherryvale improvements. Additionally, the CIP budget has 500,000 dollars in 2008 to correct pressure Zone 2 transmission problems.

IV. Proposal Requirements

The proposal should address the following items.

A. Introduction - The introduction should present the highlights of the Design and Construction Services Proposal. This includes approach, qualifications and other unique aspects of the proposal.
B. Project Approach - The discussion in this section should address the approach that would be taken to evaluate the existing systems and improve and/or replace them. Any unique features of your approach to the evaluation and design process should be highlighted in this section.
C. Qualifications - The respondent should present the qualifications of staff and the company. This section could include an organizational chart indicating key staff members that will be assigned to this project. Qualifications of these staff members should be discussed and a

statement regarding their availability as a percentage of time should be presented. Experience in designing pump stations and retrofitting existing pump stations should be included as should experience with evaluating water transmission and distribution systems.

D. Scope of Work - This section should convey the respondent's interpretation of the scope of work and emphasize those aspects of the work that require specific attention. The consultant should recommend revisions or additions to the scope of work based upon the respondent's experience in this section. The scope of work presented in the proposal will serve as the basis for subsequent contract negotiations.
E. Schedule - A schedule of sufficient detail to convey an understanding of the timing of the work elements should be presented.
F. Cost - A cost estimate for the work should be presented. The cost estimate should include a breakdown for each work element presented in the scope of work. The breakdown should be supported by man-hour estimates, overhead and profit multipliers, and standard billing rates for personnel, equipment, and subcontractors. A discussion of the assumptions used to prepare the cost estimate should be included. The cost estimate should include the cost of providing the final documents and drawings, including final as-built drawings, in Word, the latest version of AutoCAD, and PDF electronic formats and all other deliverables.
G. Contract - The attached sample contract should be reviewed by the respondent. Any terms and conditions contained in this sample contract to which the respondent cannot agree should be noted and discussed.

V. Reference Material:

The following reference materials are available as PDF files for review by interested consultants.

1. 'Zone1 Distribution System Analysis', Feb 2003, Integra Engineering
2. Iris and Cherryvale Pump Station Evaluation memo, April 2004, McLaughlin Water Engineers

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Additional reference materials will be made available to the selected consultant. Some of the additional reference materials are summarized in Attachment A. The City's water system model will be available in EPAnet or InfoWater formats to aid in the evaluation phase of this work.

VI. Proposal Submittal:

All proposals must be submitted printed double sided on recycled paper. Six copies of the proposal or an electronic PDF file format copy must be received by the City of Boulder Public Works Department, Utilities Division, by 5:00 p.m**. July 17, 2008.** The City of Boulder Public Works office is located in the Park Central Building, 1739 Broadway, room 211, Boulder, Colorado, 80302 or P.O. Box 791, Boulder Colorado, 80306. Proposals should be directed to the attention of Randy Earley, Project Manager.

VII. Selection Criteria:

The proposal will be evaluated by a selection committee comprised of representatives from the Public Work Utilities Department. Proposals will be evaluated on the basis of direct and concise responses to the items listed under the proposal requirements. Respondents may be required to attend an interview at which time additional oral or written presentations may be required. These interviews will be scheduled if they are determined to be necessary.

VIII. Limitations:

The City reserves the right to reject and /or all proposals and waive any informalities or irregularities therein. The proposal is prepared at the Respondent's expense and becomes City record and therefore a public record. Confidential data, if identified as such, will be held in confidence upon request, if the request is made as part of the proposal and if the City Attorney determines that the data meets the requirements of the Colorado Public Records Act.

IX. General Information:

Question should be directed to Randy Earley. He can be reached by telephone at 303-441-4273, by mail at PO Box 791, boulder, Colorado, 80306 or by email at **earleyr@bouldercolorado.gov** .

Attachment A

CITY OF BOULDER
UTILITIES DIVISION
SUMMARY OF STUDIES AND REPORTS
June 6, 2008

The following studies and reports provide information regarding Boulder's Water Utility:

- Treated Water Master Plan
- Gunbarrel - Heatherwood Water and Sewer Master Plan, McLaughlin Water Engineers, 1988
- Master Plan of Treated Water Facilities, Black & Veatch, 1984
- North Boulder Area Water and Sewer Master Plan, McLaughlin Water Engineers, 1990
- Raw Water Master Plan, WBLA Inc., 1988
- Treated Water Master Plan, Phase I Report, Brown & Caldwell, 1990
- Treated Water Master Plan, Phase II, Brown & Caldwell, 1992
- Water Source Impact Assessment, Brown & Caldwell, 1992
- Watershed Dams Project, Condition Assessment and Remedial Measures Feasibilty Study, Harza Engineering, 1988
- Water Conservation Futures Study
- Rate Study and Plant Investment Fee Analyses, Volume 1
- Rate Study and Plant Investment Fee Analyses, Volume 2
- Source Water Quality Planning Study
- Sludge Disposal Options Study
- Report on Barker Pipeline and Rehabilitation and Related Improvements
- Corrosion Control Evaluation Study
- Water Distribution System Evaluation Study
- History of the Waterworks of Boulder, Colorado, Phyllis Smith, 1986